WHAT IS CLAIMED IS:

1.   A system capable of providing differentiated service in a network environment, said system comprising at least one of:

    an information management system capable of providing session-aware differentiated service; or

    an information management system capable of providing differentiated service and comprising a deterministic system architecture; or

    an information management system capable of providing differentiated service at a network endpoint of said network; or

    a combination thereof.

2.   The system of claim 1, said system comprising an information management system coupled to said network at a point outside a core of said network.

3.   The system of claim 2, said system comprising a device that converges from an information source to said network.

4.   The system of claim 2, said system comprising a content delivery system.

5.   The system of claim 2, wherein said information management system comprises an application serving node.

6.   The system of claim 2, said system comprising at least one at least one of a switch, router, server, load balancer, web-cache node, policy management node, traffic management node, storage virtualization node, node between server and switch, storage networking node, application networking node, data communication networking node, content delivery management node, or a combination thereof.

7.   The system of claim 2, said system comprising a storage virtualization node that comprises a cluster of two or more content delivery systems coupled together in a content delivery management configuration.

5   8.   The system of claim 2, said system comprising at least one of a network endpoint information management node, an edge information management node, an intermediate traffic management node, an information management data center node, a processing engine node distributively interconnected with other processing engine nodes across said network, or a combination thereof.

10   9.   The system of claim 8, said system comprising a network endpoint content delivery system, an edge content delivery system, an intermediate traffic management system coupled between a content source and said network, a content delivery data center system, a content delivery data processing engine, or a combination thereof.

15   10.   The system of claim 9, said system comprising a network endpoint content delivery system.

11.   The system of claim 2, wherein said differentiated service comprises at least one of differentiated information service, differentiated business service, or a combination thereof.

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12.   The system of claim 2, said system being capable of providing one or more services or providing one or more packages of services to two or more different network entities in a manner that is differentiated between said two or more different network entities.

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13.   The system of claim 2, said system being capable of providing one or more services or providing one or more packages of services to two or more different network entities in a manner that vertically differentiates said services or packages of services between said two or more network entities.

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14.   The system of claim 2, said system being capable of providing respective services or packages of services associated with two or more different service provider network entities to one or more different network entities in a manner that horizontally differentiates each of

said services or packages of services based on the respective service provider associated with each of said services or packages of services.

15.   The system of claim 1, wherein said system comprises an information management system having a deterministic system architecture that comprises a plurality of distributively interconnected processing engines.

16.   The system of claim 1, wherein said system comprises an information management system capable of dynamic resource allocation or re-allocation.

17.   The system of claim 2, said system comprising:

a deterministic system architecture;

an operating system in communication with said deterministic system architecture;

at least one application in communication with said operating system; and

a differentiated service infrastructure in communication with said operating system.

18.   The system of claim 17, wherein said differentiated service comprises differentiated information service.

19.   The system of claim 17, wherein said differentiated service comprises differentiated business service.

20.   A method of providing differentiated service in a network environment, said method comprising:

providing session-aware differentiated service using at least one information management system; or

providing differentiated service using an information management system that comprises a deterministic system architecture; or

providing differentiated service at a network endpoint of said network using an information management system; or

5   a combination thereof.

21. The method of claim 20, wherein said providing comprises providing said differentiated service using at least one information management system coupled to said network at a point outside a core of said network.

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22. The method of claim 21, wherein said at least one information management system comprises a device that converges from an information source to said network.

23. The method of claim 21, wherein said at least one information management system
15 comprises an application serving node.

24. The method of claim 21, wherein said at least one information management system comprises a content delivery system.

20 25. The method of claim 21, wherein said at least one information management system comprises at least one of a switch, router, server, load balancer, web-cache node, policy management node, traffic management node, storage virtualization node, node between server and switch, storage networking node, application networking node, data communication networking node, content delivery management node, or a combination
25 thereof.

26. The method of claim 21, wherein said at least one information management system comprises a storage virtualization node comprising a cluster of two or more content delivery systems coupled together in a content delivery management configuration.

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27. The method of claim 21, wherein said at least one information management system comprises at least one of a network endpoint information management node, an edge information management node, an intermediate traffic management node, an information

management data center node, a processing engine node distributively interconnected with other processing engine nodes across said network, or a combination thereof.

28.   The method of claim 27, wherein said at least one information management system comprises a network endpoint content delivery system, an edge content delivery system, an intermediate traffic management system coupled between a content source and said network, a content delivery data center system, a content delivery data processing engine, or a combination thereof.

29.   The system of claim 28, said system comprising a network endpoint content delivery system.

30.   The method of claim 21, wherein said differentiated service comprises at least one of differentiated information service, differentiated business service, or a combination thereof.

31.   The method of claim 21, wherein said providing differentiated service comprises providing one or more services or providing one or more packages of services, to two or more different network entities in a manner that is differentiated between said two or more different network entities.

32.   The method of claim 21, wherein said providing differentiated service comprises providing one or more services or providing one or more packages of services, to two or more different network entities in a manner that vertically differentiates said services or packages of services between said two or more network entities.

33.   The method of claim 21, wherein said providing differentiated service comprises providing respective services or packages of services associated with two or more different service provider network entities to one or more different network entities in a manner that horizontally differentiates each of said services or packages of services based on the respective service provider associated with each of said services or packages of services.

34.   The method of claim 20, wherein said system comprises an information management system having a deterministic system architecture that comprises a plurality of distributively interconnected processing engines; and wherein said method comprises manipulating

information in a differentiated manner by assigning one or more tasks to one or more of said processing engines to cause said differentiated manipulation of information.

35. The system of claim 20 wherein said method further comprises dynamically allocating or re-allocating system resources.

36. The method of claim 20, wherein said providing comprises providing said differentiated service using a system comprising:

a deterministic system architecture;

an operating system in communication with said deterministic system architecture;

at least one application in communication with said operating system; and

a differentiated service infrastructure in communication with said operating system.

37. The method of claim 36, wherein said differentiated service comprises differentiated information service.

38. The method of claim 36, wherein said differentiated service comprises differentiated information service.

39. A method of providing differentiated service in a network environment, said method comprising providing said differentiated service from a network endpoint information management system.

40. The method of claim 39, wherein said network endpoint information management system is coupled to one or more intermediate or core nodes of a network.

41. The method of claim 39, wherein said network endpoint information management system is coupled to one or more core nodes of a network via one or more intermediate nodes,

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42.   The method of claim 39, wherein said network endpoint information management system comprises a network endpoint content delivery system.

43.   The method of claim 42, wherein said network endpoint information management system comprises a content source, and wherein said providing differentiated service comprises handling at least one of incoming or outgoing information traffic in a differentiated manner based on one or more parameters associated with said traffic, or a combination thereof.

44.   The method of claim 43, wherein said providing differentiated service comprises at least one of:

reading incoming classification information associated with incoming data packets and handling said incoming data packets in a differentiated manner based on said incoming classification information associated with said data packets; or

tagging outgoing data packets with outgoing classification information readable by one or more of said intermediate or core nodes, said outgoing classification information being reflective of differentiated handling instructions for said outgoing data packets by one or more of said intermediate or core nodes; or

a combination thereof.

45.   The method of claim 44, wherein said differentiated service comprises differentiated business service.

46.   The method of claim 44, wherein said differentiated service comprises differentiated information service.

47.   A method of providing differentiated service in a network environment, said method comprising providing said differentiated service from an information management data center node coupled to said network.

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48.   The method of claim 47, wherein said method further comprises providing differentiated business service on behalf of two or more tenant xSP's from said information management data center node.

5   49.   The method of claim 47, wherein said information management data center node is coupled to one or more core nodes of said network without the presence of intervening intermediate nodes, and wherein said providing comprises providing said differentiated service directly to one or more core nodes of said network.

10   50.   The method of claim 49, wherein said information management data center node comprises a content delivery data center system.

51.   The method of claim 50, wherein said information management data center node comprises a content source, and wherein said providing differentiated service comprises
15   handling at least one of incoming or outgoing information traffic in a differentiated manner based on one or more parameters associated with said traffic, or a combination thereof.

52.   The method of claim 51, wherein said providing differentiated service comprises at least one of:

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reading incoming classification information associated with incoming data packets and handling said incoming data packets in a differentiated manner based on said incoming classification information associated with said data packets; or

25   tagging outgoing data packets with outgoing classification information readable by one or more of said intermediate or core nodes, said outgoing classification information being reflective of differentiated handling instructions for said outgoing data packets by one or more core nodes of said network; or

30   a combination thereof.

53.   The method of claim 52, wherein said differentiated service comprises differentiated business service.

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54. The method of claim 52, wherein said differentiated service comprises differentiated information service.

55. A method of providing differentiated service in a network environment, said method comprising providing session-aware differentiated service from an intermediate traffic management node coupled to said network.

56. The method of claim 55, wherein said intermediate traffic management node is coupled between a network endpoint information management system and one or more intermediate or core nodes of said network, and wherein said providing comprises providing said differentiated service directly to said one or more intermediate or core nodes of said network.

57. The method of claim 56, wherein said intermediate traffic management node is present as a subsystem component of an intermediate node and is coupled to at least one core node of said network, and wherein said providing comprises providing said differentiated service directly to said at least one core node of said network

58. The method of claim 56, wherein said intermediate traffic management node is coupled between a network endpoint content delivery system and said one or more intermediate or core nodes of said network.

59. The method of claim 58, wherein said providing differentiated service comprises handling at least one of incoming or outgoing information traffic in a differentiated manner based on one or more parameters associated with said traffic, or a combination thereof.

60. The method of claim 59, wherein said differentiated service comprises at least one of service level management, classification, or data logging of traffic between said network endpoint content delivery system and said one or more core nodes of said network, or a combination thereof.

61. The method of claim 60, wherein said differentiated service comprises at least one of making data traffic redirection decisions, classifying data packets, tracking data traffic, or a combination thereof.

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62.   The method of claim 61, wherein said providing differentiated service comprises at least one of:

5   reading incoming classification information associated with incoming data packets and handling said incoming data packets in a differentiated manner based on said incoming classification information associated with said data packets; or

           tagging outgoing data packets with outgoing classification information readable by

10   one or more of said intermediate or core nodes, said outgoing classification information being reflective of differentiated handling instructions for said outgoing data packets by one or more of said intermediate or core nodes; or

           a combination thereof.

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63.   The method of claim 55, wherein said intermediate traffic management node comprises an information management system having a deterministic system architecture that comprises a plurality of distributively interconnected processing engines; and wherein said method comprises manipulating information in a differentiated manner by assigning one or

20   more tasks to one or more of said processing engines to cause said differentiated manipulation of information.

64.   The system of claim 55 wherein said method further comprises dynamically allocating or re-allocating system resources.

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65.   The method of claim 62, wherein said differentiated service comprises differentiated business service.

66.   The method of claim 62, wherein said differentiated service comprises differentiated

30   information service.

67.   A method of providing differentiated service in a network environment, said method comprising providing session-aware differentiated service from an edge information management node coupled to said network.

68.   The method of claim 67, wherein said edge information management node is coupled to one or more core nodes of said network without the presence of intervening intermediate nodes, and wherein said providing comprises providing said differentiated service directly to one or more core nodes of said network.

69.   The method of claim 68, wherein said edge information management node is coupled by a signal path to one or more other separate edge information management nodes in a clustered configuration.

70.   The method of claim 69, wherein said signal path enables deterministic communication between said separate information management nodes, and wherein said providing differentiated service comprises managing the manipulation of information between said separate clustered information management nodes in a deterministic manner.

71.   The method of claim 70, wherein said providing differentiated service further comprises receiving a request for information management from a user, and selecting one or more particular edge information management nodes to manage information in response to said request; wherein one or more edge information management nodes selected corresponds to a node containing specific information requested by said user, corresponds to a node assigned to a particular SLA policy associated with said request or said user, corresponds to a node having sufficient available resources to manage information associated with said request, or a combination thereof.

72.   The method of claim 71, wherein said one or more edge information management nodes comprise edge content delivery systems, and wherein said request for information management comprises a request for content delivery.

73.   The method of claim 68, wherein said edge information management node comprises an edge content delivery system.

74.   The method of claim 69, wherein said edge content delivery system comprises a content source, and wherein said providing differentiated service comprises handling at least

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one of incoming or outgoing information traffic in a differentiated manner based on one or more parameters associated with said traffic, or a combination thereof.

75. The method of claim 70, wherein said providing differentiated service comprises at least one of:

reading incoming classification information associated with incoming data packets and handling said incoming data packets in a differentiated manner based on said incoming classification information associated with said data packets; or

tagging outgoing data packets with outgoing classification information readable by one or more core nodes of said network, said outgoing classification information being reflective of differentiated handling instructions for said outgoing data packets by one or more of said core nodes; or

a combination thereof.

76. The method of claim 67, wherein said intermediate traffic management node comprises an information management system having a deterministic system architecture that comprises a plurality of distributively interconnected processing engines; and wherein said method comprises manipulating information in a differentiated manner by assigning one or more tasks to one or more of said processing engines to cause said differentiated manipulation of information.

77. The system of claim 67 wherein said method further comprises dynamically allocating or re-allocating system resources.

78. The method of claim 75, wherein said differentiated service comprises differentiated business service.

79. The method of claim 75, wherein said differentiated service comprises differentiated information service.

80. A method of providing differentiated service to a network core, comprising providing session-aware differentiated service using at least one information management node.

81. The method of claim 80, wherein said method further comprises providing said differentiated service in a manner that is network transport independent.

82. The method of claim 80, wherein said providing differentiated service comprises differentiating data packets in a session-aware manner based on packet classification, said packet classification being representative of one or more policy-indicative parameters associated with information management policy.

83. The method of claim 82, wherein said wherein said providing differentiated service comprises differentiating data packets by at least one of reading packet classifications of incoming packets to said information management node, tagging outgoing packets from said information management node with packet classifications, or a combination thereof.

84. The method of claim 82, wherein said packet classification is based on a packet classification technology that is at least one of a layer two through layer seven packet classification technology.

85. The method of claim 83, wherein said information management node comprises at least one network processor, and wherein said method comprises reading packet classifications of incoming packets, or tagging said outgoing packets with packet classifications using said at least one network processor.

86. The method of claim 85, wherein said information management node comprises a network endpoint information management node, and wherein said method further comprises searching packets incoming to said information management node for labels representative of one or more policy-indicative parameters associated with information management policy, and further comprises handling each said packet according to a policy associated with said one or more parameters.

87. The method of claim 85, wherein said information management node comprises a network endpoint information management node, and wherein said method further comprises

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tagging outgoing packets from said network endpoint information management node with labels representative of one or more policy-indicative parameters associated with information management policy, said labels on each said outgoing packet band indicating how said packet should be differentially handled by one or more intermediate or core nodes of said network.

88.   The method of claim 85, wherein said information management node comprises a network endpoint information management node, and wherein said method further comprises tagging outgoing packets from said network endpoint information management node with labels representative of one or more policy-indicative parameters associated with information management policy, said labels on each said outgoing packet band indicating how said packet should be differentially handled by one or more intermediate or core nodes of said network.

89.   The method of claim 87, wherein said network endpoint information management node is configured to be application-aware, and wherein said method comprises tagging said outgoing packets with labels in a manner that achieves application aware packet classification.

90.   The method of claim 85, wherein said information management node comprises an intermediate traffic management node coupled between an information source origin and said core of said network, and wherein said method further comprises searching packets incoming to said traffic management node for labels representative of one or more policy-indicative parameters associated with information management policy, and further comprises transferring each said packet to said information source origin for further handling according to said labels.

91.   The method of claim 85, wherein said information management node comprises an intermediate traffic management node coupled between an information source origin and said core of said network, and wherein said method further comprises tagging outgoing packets from said network endpoint information management node with labels representative of one or more policy-indicative parameters associated with information management policy, and further comprising transferring each said packet to an intermediate node coupled between said traffic management node and said core of said network or directly to a core of said network for further handling according to said labels.

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92.   A method of managing information in a network connectable information management system, comprising at least one of:

           manipulating information in a differentiated manner based at least in part on a status of at least one parameter associated with a request received from a network for said information manipulation; or

           monitoring resource usage within said system in a differentiated manner; or

           a combination thereof.

93.   The method of claim 92, wherein said network connectable information management comprises a deterministic system architecture.

94.   The method of claim 93, wherein said information management system comprises a network endpoint system.

95.   The method of claim 94, wherein said network endpoint system is a content delivery system.

96.   The method of claim 93, wherein said system comprises an intermediate node system, and wherein one of said processing engines comprises a network processor.

97.   The method of claim 96, wherein said intermediate node system is a network switch, network router, web cache node, traffic management node, edge serving device, or a combination thereof.

98.   The method of claim 93, wherein said manipulating comprises manipulating said information in a manner differentiated relative to other requests received from said network for information manipulation.

99.   The method of claim 98, wherein said manipulating comprises delivering content to said network in a manner differentiated relative to other requests received from said network for content delivery.

100. The method of claim 93, wherein said parameter comprises priority-indicative information associated with said request.

5   101. The method of claim 93, wherein said method comprises manipulating information in a differentiated manner; and further comprises reserving resources within said system that are required to manipulate said information, said reserving occurring prior to said manipulating.

102. The method of claim 101, wherein said system comprises a plurality of processing
10   engines, each of said processing engines being assigned separate information manipulation tasks in an asymmetrical multi-processor configuration; and wherein said method comprises manipulating information in a differentiated manner by assigning one or more tasks to one or more of said processing engines to cause said differentiated manipulation of information.

15   103. The method of claim 93, wherein said method comprises monitoring resource usage within said system in a differentiated manner.

104. The method of claim 103, wherein said resource usage reflects resources required to manipulate information in response to a request received from said network for said
20   information manipulation.

105. The method of claim 103, wherein said system comprises shared resources, and wherein said method comprises monitoring usage of said shared resources.

25   106. The method of claim 103, wherein said method further comprises generating billing information based on said monitored resource usage.

107. The method of claim 103, wherein said method further comprises using said monitored resource usage to determine or evaluate information manipulation performance.

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108. The method of claim 103, wherein said method further comprises using said monitored resource usage to track at least one of system performance, application performance, or compliance with service level agreement policy terms.

109.   The method of claim 103, wherein said system comprises a plurality of processing engines, each of said processing engines being assigned separate information manipulation tasks in an asymmetrical multi-processor configuration; and wherein said method comprises manipulating information in a differentiated manner by assigning one or more tasks to one or more of said processing engines based on said monitored resource usage to cause said differentiated manipulation of information.

110.   The method of claim 93, wherein said system comprises a plurality of processing engines, each of said processing engines being assigned separate information manipulation tasks in an asymmetrical multi-processor configuration; and wherein said method comprises manipulating information in a differentiated manner by assigning one or more tasks to one or more of said processing engines based on said status of at least one parameter associated with a request received from a network for said information manipulation to cause said differentiated manipulation of information.

111.   The method of claim 110, wherein said system further comprises a deterministic system BIOS, deterministic operating system, or combination thereof that is capable of effecting said assignment of said one or more tasks to one or more of said processing engines based on said status of at least one parameter.

112.   The method of claim 110, wherein said assigning of one or more tasks to said one or more of said processing engines comprises making appropriate system calls to OS-extensions.

113.   The method of 110, wherein the status of said at least one parameter associated with said request is indicative of a relative priority of said request; wherein said plurality of processing engines are interconnected in a distributed manner that supports prioritized I/O operations; and wherein said assigning comprises prioritizing the assignment of one or more tasks to one or more of said processing engines based on the relative priority of said status of said at least one parameter so that information traffic associated with requests having higher relative priority continues to flow relative to information traffic associated with requests having lower relative priority in times during which said interconnection between said processing engines is congested.

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114.   The method of claim 113, wherein said plurality of processing engines are interconnected with a switch fabric that supports prioritized I/O operations.

115.   The method of claim 93, wherein said method comprises manipulating information in a differentiated manner by implementing the necessary system resource utilization and user priority information using system calls to OS-extensions.

116.   The method of claim 93, wherein said system comprises a network endpoint system, and wherein said method comprises manipulating information in a differentiated manner by distinguishing between two or more different service class parameters associated with two or more respective information manipulation tasks.

117.   The method of claim 116, wherein said manipulating information in a differentiated manner further comprises performing each of said two or more respective information manipulation tasks in a differentiated manner based upon identity of said two or more service class parameters.

118.   The method of claim 116, wherein said manipulating information in a differentiated manner further comprises making one or more processing decisions regarding the performance of said two or more respective information manipulation tasks relative to each other.

119.   The method of claims 118, wherein said one or more processing decisions comprises a decision related to admission control, resource allocation, queue prioritization, request transfer, or a combination thereof.

120.   The method of claim 119, wherein said network endpoint system is a content delivery system, and wherein said two or more respective information manipulation tasks are associated with the fulfillment of two or more respective requests for content.

121.   The method of claim 120, wherein said service class parameters each comprise at least one of a parameter based on content, a parameter based on application, a parameter based on user, or a combination thereof.

122.   The method of claim 116, wherein said distinguishing between two or more different service class parameters comprises using one or more policies to direct the operational behavior of the network endpoint system.

123.   The method of claim 122, further comprising using said one or more policies to associate each of said two or more service class parameters with a particular network class of service mechanism.

124.   A system for providing differentiated service in an information management environment, comprising a deterministic system architecture, said system being capable of providing differentiated service.

125.   The system of claim 124, further comprising:

an operating system in communication with said deterministic system architecture;

at least one application in communication with said operating system; and

a differentiated service infrastructure in communication with said operating system, said differentiated service infrastructure being capable of performing differentiated service tasks.

126.   The system of claim 125, wherein said deterministic system architecture comprises a plurality of processing engines that are distributively interconnected.

127.   The system of 126, wherein said processing engines are assigned separate information manipulation tasks in an asymmetrical multi-processor configuration.

128.   The system of 127, wherein said deterministic system architecture further comprises deterministic system software in communication with said operating system and having state knowledge of resource utilization within said architecture, said deterministic system software being capable of deterministically controlling interaction between said distributively interconnected processing engines in response to communication received from said operating system.

129.   The system of claim 128, wherein at least one of said processing engines comprises a monitoring agent capable of monitoring resource characteristics of said processing engine, and wherein said system architecture further comprises a system monitor in communication with said monitoring agent that has system management capability.

130.   The system of claim 125, wherein said system architecture is capable of supporting a discrete family of applications or multiple concurrent applications.

131.   The system of claim 129, wherein said system architecture supports system calls to OS-extensions to determine characteristics of one or more resource utilization parameters associated with one or more of said processing engines.

132.   The system of claim 125, wherein said system architecture supports system calls to OS-extensions to determine characteristics of user priority information associated with information managed in said information management environment.

133.   The system of claim 131, wherein said system architecture further supports system calls to OS-extensions to determine characteristics of user priority information associated with information managed in said information management environment.

134.   The system of claim 131, wherein said operating system comprises a conventional operating system, and wherein said at least one application is ported to said operating system through an application programming interface so that functions of said application are executed in a manner that is unaware of asymmetric and deterministic capabilities of said system architecture.

135.   The system of claim 131, wherein said at least one application is configured to intelligently handle system congestion by virtue of code included in said application that utilizes calls into said operating system indicative of the relative priority of each connection or request, and that utilizes calls indicative of the availability of necessary resources in said system architecture to support information management capability.

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136. The system of claim 131, wherein said operating system is capable of direct deterministic communication with said deterministic system architecture, and is further capable of implementing and managing system calls indicative of the relative priority of each connection or request, and that utilizes calls indicative of the availability of necessary resources in said system architecture to support information management capability.

137. The system of claim 125, further comprising a deterministic system BIOS that provides a communication interface between said system architecture and said operating system.

138. The system of claim 131, further comprising a deterministic system BIOS that provides a communication interface between said system architecture and said operating system, said deterministic system BIOS capable of managing system calls made to processing engines of said system architecture from said at least one application.

139. The system of claim 138, wherein said deterministic system BIOS is capable of responding to application requests for resources with availability information, rerouting information, SLA choice information, or a combination thereof.

140. The system of claim 125, further comprising at least one application program interface that provides communication interface between said at least one application and said operating system.

141. The system of claim 140, wherein said application comprises at least one of an internet application, network content delivery application, or a combination thereof.

142. The system of claim 125, wherein said differentiated service tasks comprise at least one of:

provisioning one or more system service parameters;

monitoring one or more system performance parameters related to information management in real time or on a historical basis;

managing performance of one or more information manipulation tasks related to said information management based on one or more class identification parameters associated with said information manipulation tasks and based on one or more provisioned system service parameters, one or more monitored system performance parameters, or a combination thereof;

reporting information related to said monitored system performance parameters; or

a combination thereof.

143.   The system of claim 142, wherein said differentiated service tasks comprise reporting information related to said monitored system performance to a physically remote located system or external entity for generation of billing data based thereon.

144.   The system of claim 142, wherein said reported information comprises billing information.

145.   The system of claim 144, wherein said billing information is related to consumption or use of one or more system resources.

146.   The system of claim 125, wherein said operating system is configured in deterministic communication with system or subsystem components that are external to said system.

147.   The system of claim 146, wherein said external system or subsystem components comprise clustered arrangements of geographically dispersed systems, subsystems or components.

148.   The system of claim 146, wherein said external system or subsystem components comprise components not directly coupled to said system through a common distributed interconnect.

149.   The system of claim 125, wherein said system comprises an information management node coupled to a network at a point outside a core of said network.

150.   A method of providing differentiated service in an information management environment, comprising providing said differentiated service using at least one information management system that comprises a deterministic system architecture.

151.   The method of claim 150, wherein said system further comprises:

an operating system in communication with said deterministic system architecture;

at least one application in communication with said operating system; and

a differentiated service infrastructure in communication with said operating system, said differentiated service infrastructure being capable of performing differentiated service tasks.

152.   The method of claim 151, wherein said deterministic system architecture comprises a plurality of processing engines that are distributively interconnected and that are assigned separate information manipulation tasks in an asymmetrical multi-processor configuration; wherein said deterministic system architecture further comprises deterministic system software in communication with said operating system and having state knowledge of resource utilization within said architecture; and wherein said method further comprises using said deterministic system software to deterministically control interaction between said distributively interconnected processing engines in response to communication received from said operating system.

153.   The method of claim 152, wherein one or more of said processing engines comprises a monitoring agent; wherein said system architecture further comprises a system monitor in communication with said monitoring agent; and wherein said method further comprises monitoring resource characteristics of said processing engine with said system monitor, and performing system management with said system monitor.

154.   The method of claim 153, wherein said method further comprises making system calls to OS-extensions to determine characteristics of one or more resource utilization parameters associated with one or more of said processing engines; and making calls to OS-extensions to

determine characteristics of user priority information associated with information managed in said information management environment.

155. The method of claim 154, wherein said method further comprises intelligently handling system congestion using code included in said at least one application by utilizing calls into said operating system indicative of the relative priority of each connection or request; and by utilizing calls indicative of the availability of necessary resources in said system architecture to support information management.

156. The method of claim 154, wherein said operating system is capable of direct deterministic communication with said deterministic system architecture; and wherein said method further comprises using said operating system to implement and manage system calls indicative of the relative priority of each connection or request; and using said operating system to support information management by using calls indicative of the availability of necessary resources in said system architecture.

157. The method of claim 151, wherein said system further comprises a deterministic system BIOS that provides a communication interface between said system architecture and said operating system; and wherein said method further comprises using said deterministic system BIOS to manage system calls made to processing engines of said system architecture from said at least one application; and using said deterministic system BIOS to respond to application requests for resources with availability information, rerouting information, SLA choice information, or a combination thereof.

158. The method of claim 151, wherein said system further comprises at least one application program interface that provides communication interface between said at least one application and said operating system; and wherein said application comprises at least one of an internet application, network content delivery application, or a combination thereof.

159. The method of claim 151, wherein said differentiated service comprises at least one of:

provisioning one or more system service parameters;

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monitoring one or more system performance parameters related to information management in real time or on a historical basis;

managing performance of one or more information manipulation tasks related to said information management based on one or more class identification parameters associated with said information manipulation tasks and based on one or more provisioned system service parameters, one or more monitored system performance parameters, or a combination thereof;

reporting information related to said monitored system performance parameters; or

a combination thereof.

160. The method of claim 159, wherein said differentiated service tasks comprise reporting information related to said monitored system performance to a physically remote located system or external entity for generation of billing data based thereon; said reported information comprising billing information related to consumption or use of one or more system resources.

161. The method of claim 151, wherein said operating system is configured in deterministic communication with system or subsystem components that are external to said system.

162. The system of claim 161, wherein said external system or subsystem components comprise clustered arrangements of geographically dispersed systems, subsystems or components.

163. The system of claim 161, wherein said external system or subsystem components comprise components not directly coupled to said system through a common distributed interconnect.

164. The system of claim 151, wherein said system comprises an information management node coupled to a network at a point outside a core of said network.